

<b>RESEARCH WORK UNIT DESCRIPTION</b> Ref: FSM 4070	1. Number FS-SRS-4802	2. Station Southern Research Station
	3. Unit Location New Orleans, LA	
4. Research Work Unit Title Legal, Tax, and Socio-Economic Influences on Forest Resource Management		
5. Project Leader (Name and address) James E. Granskog, Southern Research Station, 701 Loyola Ave., New Orleans, LA 70113		
6. Area of Research Applicability Problems 1 & 2, nationwide; Problems 3 & 4, southwide.		7. Estimated Duration Five years
8. Mission  To evaluate legal, tax, social, and economic influences on forest resource management and investment, and to develop guidelines that will support the sustainable management of forests.		

**9. Justification and Problem Selection**

The people of the United States derive a number of goods and services from private and public forests. Findings from the 2000 RPA Assessment of the Forest and Rangeland Situation in the United States indicate the demands for most forest products will increase in the future. To meet the projected demands of a growing population, more outputs will need to be produced from the available land base. The concept of sustainability offers a solution to the dichotomy between the Nation’s immediate need for forest benefits and the emerging realization that we must sustain the systems that support us. Meeting human needs and achieving forest sustainability requires the simultaneous pursuit of ecological, economic, and social improvements over time.

Experience has shown that a wide variety of factors—legal, institutional, social, and economic—can influence landowners, managers, and investors to engage in forestry activities. Legal influences can have a decided impact on both public and private land management. Tax systems can encourage or discourage sustainable management on private lands. In addition, forestry practices must be socially acceptable and economically viable to achieve sustainability.

Research needs relating to the foregoing factors were identified, prioritized, and compared to skills and resources currently available. Problem statements that follow reflect the results of that process. Highest priority is given to two areas that are national in scope—tax considerations and forest resource law—and two areas that focus on the South—social issues concerning underserved forest landowners and the economics of forest management practices.

Signature	Title	Date
Recommended: /s/ Hermann Gucinski	Assistant Director for Research	11/02/01
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The tax laws that affect forest management—the federal income and estate taxes and state income, property, harvest (severance and yield), and death (estate and inheritance) taxes—are complex and constantly changing. To federal, state, and local governments, taxes represent an essential source of revenue and flexible tools in directing public policy. To many forest owners and managers, taxes represent a critical factor in determining the feasibility of management options, the types of forest outputs produced, and the level of forest stewardship practiced. Other members of the forestry community—as well as a surprising number of tax practitioners—are essentially ignorant of the tax implications of their forest management and stewardship decisions.

In addition to providing input for forest management decisions, timely and objective assessments of proposed or recently enacted tax legislation provide significant input to legislators and other participants in the policymaking process. Combined with technology transfer on taxes, assessments also help address the problem of tax ignorance. Historically, forest-related taxes have been studied in isolation. But the various types of taxes interact with one another and with other federal, state, and local regulations to form the operating environment within which forest owners and managers must make their resource management plans and decisions. The number of regulations affecting forest management is increasing rapidly. A 1992 survey found that the number of local forestry related ordinances in the U.S. had doubled in the preceding five years. A resurvey of the 13 southern states completed in 2000 found that the number of local ordinances in that region had more than doubled once again, to 346 ordinances in 10 states. Given the complex and dynamic nature of taxes and their interaction with other regulations affecting private forest management, there is a continuing need to develop and revise economic analyses and legal guidelines to effectively incorporate tax considerations into forest management, investment, and policy decisions. (Problem 1)

Numerous laws and policies have been established to protect the environment and conserve natural resources, to achieve desired outcomes from the management of forests and renewable natural resources, and to regulate activities that may cause negative impacts, such as water pollution or wildlife habitat degradation. Laws and policies that affect forests, forest owners, and forest managers exist at all levels of government—federal, state, and local. Examples include the Clean Water Act, the Clean Air Act, the Endangered Species Act, comprehensive state forest practice acts, voluntary and mandatory state best management practices (BMPs) to protect water quality, cost-share and other incentive programs, prescribed fire and burning ordinances, county and municipal tree ordinances, and the more recent development of right-to-practice forestry acts. In addition to public policy, the trend of private organizations to implement sustainable forestry programs and certification is affecting forest management on a significant amount of U.S. timberland. To a greater or lesser degree, and depending on local conditions, every acre of forested land in the United States is affected by some type of law or policy.

Despite the comprehensive nature of these policies, the current political climate in the United States is leading to changes in forest resource utilization, production, and to the laws and regulations that govern such activities. Accordingly, there is need to explain changing forest and renewable resource laws, policies, and regulations as well as assess their effects on forests, on forest sustainability, and on the actions of public and private landowners and land managers. These assessments include (but are not limited to) determining how laws and policies affect federal, state, large industrial, and nonindustrial forest lands; measuring the sustainability of forests; identifying how changes to policies affect small business and resource dependent communities; and estimating the economic costs of laws and policies. On both national and regional scales, there is a continuing and growing need for legal and policy analyses for assessing the impacts of forestry and renewable natural resource policies, laws, and regulations on the management and sustainability of forest resources. (Problem 2)

Forests are of great social and economic importance in the South. There is evidence, however, that the benefits of forests and forestry have not been, and are not being, shared by all segments of society. Many forest-dependent rural communities have weak or poorly diversified economies and associated

social problems. Land loss by minority and limited resource landowners is a serious problem, and often exacerbated when the landowner is female. There also is evidence that these landowners' needs are not well known or regularly addressed by many forestry assistance and extension programs. While there are general discussions in the literature of the problems facing minority and limited resource landowners and of the development issues facing forest dependent rural communities, we have only limited empirical information about the social, economic, and cultural relationships between underserved populations and forests in the South.

If forests and forestry programs are to provide an equitable distribution of benefits to all segments of society in the South, we need to fill the gaps in our knowledge through systematic research on the relationships between people and forests, with special attention to those populations who have traditionally been underserved because of race/ethnicity, gender, or resource limitations. Research needs include: (a) the rural development needs of minority landowners and communities, and how these might be addressed by forest-related rural enterprises; (b) the relationship between shifting land-use patterns (agriculture to forestry) and minority land ownership; (c) the relationships between public and private forest lands; and (d) ways in which government and non-governmental forest-related outreach and assistance programs can better meet the needs of minority and limited-resource landowners. Overall, there is a need to better understand and integrate the social, economic, and cultural aspects of sustaining people and forests in the South. (Problem 3)

The U.S. economy depends on the South for two-thirds of its pulpwood, one-half of its plywood, two-fifths of its hardwood lumber, and one-third of its softwood lumber. Much of the Nation's increasing demand for timber in the years ahead also will have to come from southern woodlands. However, it will be difficult for southern forests to meet additional demands without active investment in forestry practices. Without positive steps to improve management in southern forest lands by successfully regenerating and managing forest stands following harvest, timber inventories may decline in the future as removals will exceed growth. Unfortunately, many non-industrial private landowners are reluctant to actively invest in forest regeneration practices because they lack information on the costs and returns of sustainable forest management practices. They also lack information on the trade-offs between timber and other ecosystem products.

Sustainable forest management practices need to be economically viable, ecologically sound, and socially acceptable. There is a critical need to design sustainable forest management practices for small-scale, non-industrial private landowners, and many such landowners need management systems that are less capital-intensive. Uneven-aged management of natural pine stands can be a viable alternative. There also is a lack of information concerning the costs and returns of managing for the restoration of environmentally beneficial, longleaf pine stands. For some landowners and farmers, however, it may be economically and environmentally beneficial to meet increased demands for wood products from very intensively managed lands, such as short-rotation woody crops. Many policy-makers and concerned citizens also are interested in the regional implications of forest management decisions. The impact of forestry on the southern regional economy is large and the potential for additional rural development depends upon accurate and timely assessments of regional changes and the impacts of interregional and international developments. At present, there is a continuing need for current economic information for southern landowners and forest managers to effectively evaluate silvicultural investments. (Problem 4)

Research results under Problem 1 will address Criterion 7 of the Montreal Process, particularly Indicator 58 concerning investment and taxation policies and a regulatory environment that supports sustainable management of forests. Results also will be important to: (1) private forest owners, managers, and investors—both corporate and non-corporate; (2) other rural landowners who are considering planting trees under federal and state incentive programs; and (3) public administrators and other participants in the policymaking process at all levels of government—federal, state, and local. Potential benefits will be improved and up-to-date tax guidelines and recommendations to help stimulate forestry investments, improved stewardship of the nation's private forests, and more equitable tax policies for forest owners.

Research results under Problem 2 will also address Criterion 7 of the Montreal Process, particularly those indicators that relate to the legal framework for supporting the sustainable management of forests. Research results will be of greatest importance to the same groups as identified with Problem 1, but for different reasons. Private forestland owners, managers, and investors will be more aware of their responsibilities and options under the environmental and forest resource laws that impact their activities, and able to incorporate findings into their decision making. Likewise, public policy makers and administrators will be more cognizant of the potential economic consequences associated with legislation that has been implemented and proposed. Potential benefits will be improved and up-to-date legal guidelines and assessments that will support sustainable forest management.

The research results from Problem 3 will be most important to those who have been underserved by forests and forestry because of race/ethnicity, gender, or resource limitations. Results also will be important to public agency managers and program administrators. Overall, all segments of society will benefit from more equitable policies and greater participation in programs that support sustainable management of forests.

Since the focus of research under Problem 4 will be to evaluate silvicultural investments in the South, key users of results will be forest landowners, forestry consultants, service foresters, and industrial land managers. In addition, other key users of findings will be policy analysts, rural development specialists, and other researchers, both within and outside the Forest Service, since much of the research will be done cooperatively. The potential for investment in forestry practices in the South is large. Discovering economically-sound management practices will enable sustainable forest management, which will benefit key users and society at large.

## 10. Approach to Problem Solution

Problem 1—There is a continuing need to develop and revise economic analyses and legal guidelines to effectively incorporate tax considerations into forest management, investment, and policy decisions.

Because tax law is dynamic, approaches to this problem must include compilation and continual updating of a database of the provisions of federal and state tax laws that affect forest management. The value and analytical power of the database would be greatly enhanced by linking it to a Geographic Information System (GIS). Such a geographically-referenced database would be a valuable resource to natural resource professionals involved in research, policy analysis, and technology transfer, both within and outside the agency.

Proposed or recently enacted changes to tax laws will be assessed according to how closely they conform to tax theory and to the generally accepted attributes of a “good” tax: (1) equity, (2) neutrality, (3) convenience, (4) certainty, and (5) economy. Economic models will be used to estimate the economic impact of tax law changes on forestland owners and investors and on revenue flows to government. Models also will be used to investigate how federal and state taxes interact with one another and with other regulations that affect forest management. Additional stand growth models reflecting “typical” nonindustrial forest management practices will be developed for key timber types in all U.S. regions. The effects of tax-tax and tax-regulation interactions will be assessed by imposing common systems of taxes and regulations on the models and noting their effect on land value, optimal rotation length, the volume and type of outputs produced, and return on investment. Analyses will be done for both single- and multiple-stand holdings.

Accomplishments planned for the next five years include:

1. Continuing analyses of changes, developments, and trends in the federal taxes affecting forest resource management, including the federal income tax and estate tax. Evaluate the effect of

- proposed or recently enacted changes to federal tax law on the management options and financial returns available to nonindustrial private forestland owners, managers, and investors, and on federal revenue flows.
2. Continuing analyses of changes, developments, and trends in state taxes affecting forest resource management, including state income, property, harvest (severance and yield), and death (estate and inheritance) taxes. Evaluate the effect of proposed or recently enacted changes to state tax laws on the management options and financial returns available to private forestland owners, managers and investors, and on state revenue flows.
  3. Examine how federal and state taxes interact with one another and with other regulations affecting private forest management.
  4. Investigate the role of targeted tax incentives as a policy tool to encourage improved stewardship and sustainability of nonindustrial private forests.

Problem 2—There is a continuing and growing need for legal and policy analyses for assessing the impacts of forestry and renewable natural resource policies, laws, and regulations on the management and sustainability of forest resources.

As with Problem 1, research in this problem area will begin with basic identification, delineation, and in-depth analyses of those aspects of forestry and environmental law that affect private and public forest management. Because such law is often subject to rapid change, the approach to this problem must also be dynamic in nature. Besides analyzing how existing legislation affects forestland owners and managers, it will be necessary to monitor proposed legislative changes and to evaluate their implications. Research will focus on those aspects of forestry and environmental law that are relevant to interpreting and measuring sustainability. Priorities can be broken down into two categories: (1) updating the most important ongoing unit research in this problem area, and (2) addressing new research needs that were identified. Ongoing activities include analyses of changes, developments, trends, and impacts of forest resource law, with emphasis on federal and state water quality laws, endangered species laws, and local forestry-related ordinances. Areas targeted for new research include total maximum daily load (TMDL) provisions in the Clean Water Act, legal and policy aspects of sustainable forestry criteria and indicators (C&I) and of second- and third-party sustainable forestry certification programs, and evaluating state programs that regulate forestry practices of private landowners. Also, it will be necessary to conduct comparative evaluations of alternative methods of pursuing environmental goals, such as regulatory versus incentive-based approaches.

Accomplishments planned for the next five years include:

1. Continuing analyses of changes, developments, and trends in forest resource and environmental law, with emphasis on the areas of water quality (including TMDLs), air quality (fire and prescribed burning), and threatened and endangered species.
2. Continuing analyses of changes, developments, and trends in forest practice law, with emphasis on state forest practice acts, local forestry-related ordinances, and right-to-practice forestry laws.
3. Analyze legal and policy aspects of sustainable forestry criteria and indicators, and of second- and third-party sustainable forestry certification programs.
4. Assess the strengths and weaknesses of alternative approaches to pursuing society's goals of continued forest productivity in concert with improved environmental quality.

Problem 3—There is a need to better understand and integrate the social, economic, and cultural aspects of sustaining people and forests in the South.

Forests are important to people for many reasons and in different ways. For example, the forest industry provides employment and income, and private nonindustrial forest landowners receive income from timber and non-timber products; other benefits are derived from culturally valued forest products, watershed protection, hunting, and outdoor recreation. However, there are segments of the population

who have been underserved by forests and forestry because of race/ethnicity, gender, or resource limitations. Addressing these inequities requires better and more specific knowledge and understanding of the social, economic, and cultural relationships between people and forests in the South.

Social research will be pursued through a collaborative approach. Research needs for minority and limited-resource landowners were identified in cooperation with the Alabama Consortium on Forestry Education and Research. Relevant social science research under the Consortium covers the full range of forest-people relationships, including (1) social, cultural, economic, and legal research on the relationship between minority and limited-resource landowners and forests, and (2) relationships between the National Forests in Alabama and minority and limited-resource landowners and forest users. Research in this problem area will be coordinated through the Consortium to ensure knowledge gaps are addressed and to avoid duplication of effort.

Accomplishments planned for the next five years include:

1. Develop adequate and accurate information on the characteristics and needs of underserved landowners from existing data sources, such as census data and county records, and from surveys.
2. Examine the changing role of forests in farming systems and rural economies in the South under the emerging globalized economy, and develop new strategies for forest-related rural development.
3. Evaluate the impact of changes in National Forest management on minority and limited-resource landowners. Findings on the relationships between National Forests and their neighbors will play a fundamental role in evaluating alternative policy and management options, and enhancing social, ecological, and economic contributions to society.

Problem 4—There is a continuing need for current economic information for southern landowners and forest managers to effectively evaluate silvicultural investments.

The research approach will be directed to determining the extent of major silvicultural treatment opportunities in the South, delineated by cost and relative financial attractiveness. The cost and timing of various possible silvicultural treatment strategies will be evaluated. All aspects of silvicultural treatments will be considered, including—but not limited to—site preparation, planting, fertilization, release, thinning, and fire. Data will be gathered through cooperation with other investigators, accessing existing data bases, or design of studies to gather relevant information. Results of the research will provide guidelines for the management of individual stands as well as a formulation of southwide policies. Regional economic impact assessments will include the effects of interregional and international developments.

Accomplishments planned for the next five years include:

1. Determine costs and returns for selected regeneration and intermediate stand management practices, in both even-aged and uneven-aged management regimes.
2. Develop economic models and guidelines for the management of longleaf pine, loblolly pine, slash pine, and other southern species as appropriate.
3. Develop economic guidelines for the sustained management of small-scale nonindustrial private forest landholders.
4. Assess the regional economic impacts of forest management activities, the potential contribution to additional rural development, and incorporate the effects of interregional and international developments.

## 11. Environmental Considerations

Proposed research activities are limited in context and intensity. The environmental effects of specific actions will be considered during the development of study plans, as well as the existence of extraordinary circumstances related to any proposed action, and categorical exclusion will be documented as a part of the study plan according to FSH 1909.15, Chapter 30.

## 12. Staffing

This research will require an average of 5.5 scientists per year, at an average annual RWU cost of \$1,375K. An estimate of scientist years and budget per problem area is as follows:

Problem	Year 1		Year 2		Year 3		Year 4		Year 5	
	SYs	\$								
1	1.0	250	1.0	250	1.0	250	1.0	250	1.0	250
2	2.0	500	2.0	500	2.0	500	2.0	500	2.0	500
3	1.0	250	1.0	250	1.0	250	1.0	250	1.0	250
4	1.5	375	1.5	375	1.5	375	1.5	375	1.5	375
Total	5.5	1375	5.5	1375	5.5	1375	5.5	1375	5.5	1375

The scientific staff is expected to consist of five permanent full-time scientists, one of whom is the Project Leader, and one permanent part-time scientist. The support staff will include a forester, a computer specialist, an administrative support assistant, and an editorial clerk; support staff will be supplemented by SCSEP enrollees and part-time, temporary appointments as needed.